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METHODS FOR SAMPLING OF AEROSOL VALVES

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METHODS FOR SAMPLING OF AEROSOL VALVES

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Indian Standard

METHODS FOR SAMPLING OF AEROSOL VALVES

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 30 September 1980, after the draft finalized by the Metal Containers Sectional Committee had been approved by the Marine, Cargo Movement and Packaging Division Council.

1. SCOPE

1.1 This standard prescribes the methods for sampling and the criteria for ascertaining the confirmity of the aerosol valves to IS : 9634-1980*.

2. TERMINOLOGY

2.0 For the purpose of this standard, the definitions given in IS : 2500 (Part I)-1973† along with the following shall apply.

2.1 Lot — All the aerosol valves manufactured from the same material, design, construction and finish manufactured successively shall be grouped together to constitute a lot.

3. LOT INSPECTION

3.1 In order to ascertain the conformity of the lot to the requirements of this standard, sample shall be drawn from each lot separately and inspected.

3.2 The number of valves to be drawn shall be according to col 2 and 5 of Table 1.

3.3 Criteria for Conformity

3.3.1 The number of valves as indicated under col 2 of Table 1 shall be inspected for valve cup gauging and air pressure testing. Any valve not meeting the requirements of the relevant clause in IS : 9634-1980* shall be considered defective. The lot shall be considered conforming to the two parameters if the number of valves found defective in the samples are less than or equal to the corresponding acceptance number given in col 3 or 4 against the samples.

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*Specification for aerosol valve — 25·4 mm diameter.

†Sampling inspection tables: Part I Inspection by attributes and by count of defects (*first revision*).

TABLE 1 SAMPLING SIZE AND CRITERIA FOR CONFORMITY

(*Clauses* 3.2 *and* 3.3.1)

LOT	SAMPLE SIZE	ACCEPTANCE NUMBER		SUB-SAMPLE SIZE FOR DIP TUBE LENGTH AND DISCHARGE RATE
		Valve Cup Gauging	Air Pressure Test	
(1)	(2)	(3)	(4)	(5)
501 to 1 000	80	1	0	30
1 000 to 3 000	125	2	0	35
3 001 to 10 000	200	3	1	40
10 001 and above	315	5	2	50

3.3.2 With regard to the dip tube length and discharge rate determinations, the number of valves as indicated under col 5 of Table 1 shall be taken and tested. The mean ($\bar{x}$) and the mean range ($\bar{R}$) shall be calculated from the results. The lot shall be declared as acceptable if expressions

$$\frac{\bar{R}}{U-L} \leqslant 0.55,\ \bar{x} + 0.8\bar{R} \leqslant U \text{ and } \bar{x} - 0.8\bar{R} \geqslant L \text{ are satisfied}$$

for the dip tube length; and

$$\frac{\bar{R}}{U-L} \leqslant 0.70,\ \bar{x} + 0.6\bar{R} \leqslant U \text{ and } \bar{x} - 0.6\bar{R} \geqslant L \text{ are satisfied}$$

for the discharge rate; where

U and L are the upper and lower specification limits.

NOTE — For calculation of $\bar{R}$, the test results shall be divided into sub-groups of five test results each taking them consecutively in the same order as obtained and the range of each sub-group shall be calculated to determine $\bar{R}$.

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*Specification for aerosol valve — 25·4 mm diameter.

(*Continued from page* 2)

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INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

Quantity	Unit	Symbol
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

Quantity	Unit	Symbol
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

Quantity	Unit	Symbol	Definition
Force	newton	N	1 N = 1 kg.m/s^{2}
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m^{2}
Frequency	hertz	Hz	1 Hz = 1 c/s (s^{-1})
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m^{2}